

PUBLIC HEALTH REPORTS

VOL. 53

APRIL 15, 1938

NO. 15

PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

February 27-March 26, 1938

The accompanying table summarizes the prevalence of eight important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State are published in the Public Health Reports under the section "Prevalence of disease." The table gives the number of cases of these diseases for the 4-week period ending March 26, the number reported for the corresponding period in 1937, and the median number for the years 1928-37.

DISEASES ABOVE MEDIAN PREVALENCE

Measles.—The current epidemic of measles has continued to increase in severity. The number of reported cases for the current 4-week

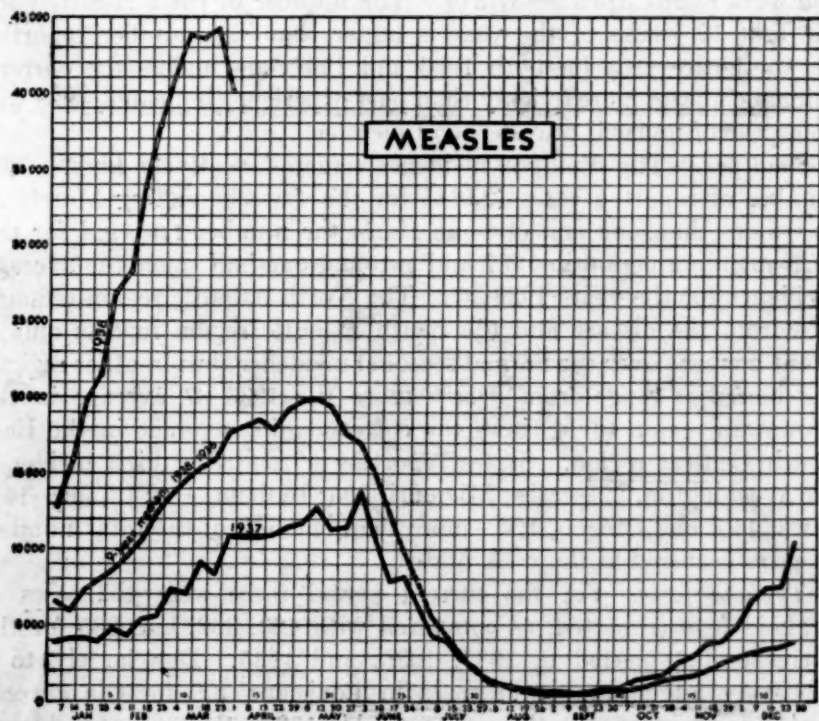


FIGURE 1.—Numbers of cases of measles reported by weeks for 1937 and 1938 and the median number of cases for the years 1928-35.

period was 172,626, as compared with 71,296 and 134,607 cases reported for the first and second 4-week periods of this year. The number of cases is more than five times that reported for the corresponding period last year and nearly three times the median number reported for 1933-37.

The New England, West North Central, and Pacific States continue to be relatively free from measles as compared with the remainder of the country. The largest number of cases relative to the seasonal expectancy is reported from the East North Central region—Ohio, Indiana, Illinois, Michigan, and Wisconsin—where the reported number of cases is nearly 8 times the seasonal expectancy, and in the East South Central region—Kentucky, Tennessee, Alabama, and Mississippi—where the current incidence is more than 10 times the seasonal expectancy based on the 5 years 1933-37.

According to past experience, the real decline in the number of reported cases usually occurs in the latter part of April; however, it may be that the peak will be reached earlier this year, as the present curve of high prevalence (fig. 1) began earlier than in prior years. The numbers of cases reported recently by weeks are as follows: Week ended March 19—43,622 cases; March 26—44,191; April 2—40,085; and week ended April 9—37,319. The number of cases reported for the first 12 weeks of the year is larger than the number reported for the entire year for both 1936 and 1937; and unless the current epidemic abates more quickly than past experience indicates, 1938 will be a year of unusual prevalence of measles.

Smallpox.—The smallpox incidence remains relatively high. The number of reported cases (2,056) for the 4 weeks ending March 26 was more than one and one-half times the number reported for the corresponding period in 1937 and two and one-half times the average incidence for the years 1933-37. The North Atlantic region remains free from the disease and the South Atlantic region reports only a slight increase over the normal seasonal incidence, but in other regions the increases range from nearly twice the 1933-37 average in the Mountain region to 14 times the corresponding average in the East South Central region. States reporting a relatively high incidence are Washington, 222 cases; Missouri, 205; Indiana, 173; Illinois, 164; Iowa, 145; and Oregon, 124—more than one-half of the total number of cases occurred in those six States.

Typhoid fever.—For the current period there were 452 cases of typhoid fever reported, as compared with 423, 362, and 385 for the corresponding period in 1937, 1936, and 1935. Due largely to a relatively large number of cases in Louisiana (98 for the current period as against 28 for the same period in 1937), the current incidence is slightly above that for last year and also above the 1933-37 median, which is represented by last year's figure of 423 cases. Preva-

lence of the disease is about normal in all sections of the country except the West South Central, which includes Louisiana.

Poliomyelitis.—The number of reported cases (81) of poliomyelitis was about normal for the season. Only the South Atlantic and South Central regions reported any definite increase over the seasonal expectancy. The 15 cases reported from the South Atlantic regions was the highest number reported from that area in recent years, and the cases in the South Central areas approximated those of 1937, when the disease was quite prevalent at this time in those regions. Other geographic regions reported about the usual seasonal incidence.

*Number of reported cases of 8 communicable diseases in the United States during the 4-week period Feb. 27–Mar. 26, the number for the corresponding period in 1937, and the median number of cases reported for the corresponding period 1933–37*¹

Division	Current period	1937	5-year median	Current period	1937	5-year median	Current period	1937	5-year median	Current period	1937	5-year median
	Diphtheria			Influenza ²			Measles ³			Meningococcus meningitis		
United States ¹	2,159	1,776	2,533	8,724	41,476	19,456	172,626	32,967	62,153	329	772	646
New England.....	69	37	64	53	450	155	2,787	7,454	7,453	12	35	18
Middle Atlantic.....	375	374	431	148	319	296	41,168	13,320	20,187	57	105	93
East North Central.....	443	354	398	334	1,506	1,320	78,396	1,453	10,197	40	92	137
West North Central.....	149	169	302	645	1,301	1,219	6,924	301	7,870	43	31	63
South Atlantic.....	441	291	349	1,601	12,148	5,643	23,754	5,409	5,539	58	166	121
East South Central.....	157	147	163	1,037	10,134	3,491	9,864	618	967	73	180	59
West South Central.....	286	265	388	3,877	12,140	6,765	3,257	2,114	2,342	27	110	55
Mountain.....	98	50	76	473	709	709	4,426	1,500	1,509	3	42	27
Pacific.....	141	89	157	466	2,769	1,310	2,090	639	4,956	16	11	17
	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
United States ¹	81	78	78	25,538	30,157	30,157	2,056	1,290	810	452	423	423
New England.....	2	1	2	2,224	2,045	1,891	0	0	0	10	18	17
Middle Atlantic.....	10	7	7	6,947	7,900	7,900	0	5	0	48	47	60
East North Central.....	13	19	11	8,020	10,491	10,718	471	199	146	67	70	61
West North Central.....	4	6	8	3,711	5,961	2,425	629	685	282	21	27	27
South Atlantic.....	15	10	9	1,175	782	1,195	22	5	12	51	80	80
East South Central.....	11	13	4	648	362	474	115	0	8	31	45	45
West South Central.....	11	12	8	693	617	562	205	59	81	171	93	79
Mountain.....	4	3	3	826	837	837	164	126	91	27	14	19
Pacific.....	11	7	16	1,294	1,162	1,325	430	211	107	26	29	29

¹ 48 States. Nevada is excluded and the District of Columbia is counted as a State in these reports.

² 44 States and New York City.

³ 46 States. Mississippi and Georgia are not included.

DISEASES BELOW MEDIAN PREVALENCE

Meningococcus meningitis.—Fewer cases of meningococcus meningitis were reported for the 4 weeks ending March 26 than have been reported for the corresponding period in 6 years. The number of cases (329) was only about 43 percent of the number reported for the same period in 1937 and about 50 percent of the 1933–37 average incidence. The low incidence was quite general. Each region,

except the East South Central and Pacific regions, reported a definite decrease from the normal seasonal expectancy. In the East South Central area the incidence was about 20 percent above the 1933-37 median, while in the Pacific area it stood at about the median level.

Diphtheria.—The total number of cases (2,159) of diphtheria reported for the current period is about 22 percent in excess of the figure for this period in 1937 but about the same as that for the corresponding period in 1936. Four geographic regions, the East North Central, South Atlantic, Mountain, and Pacific regions, showed rather definite increases over the expected seasonal incidence. Other regions either closely approximated the 1933-37 median or fell considerably below. For the country as a whole, the current incidence is about 15 percent below the average seasonal incidence.

Influenza.—The influenza incidence (8,724 cases) is unusually low. In 1937, 1936, and 1935 the numbers of cases for this period totaled approximately 41,000, 43,000, and 19,000, respectively. In 1934, a year in which the influenza incidence was also unusually low, 11,259 cases were reported for this period. All sections of the country show a relatively low incidence.

Scarlet fever.—For the country as a whole the scarlet fever incidence is the lowest reported for this period in 6 years. The number of cases (25,538) is about 85 percent of the number for the corresponding period in 1937, which figure also represents the median incidence for the years 1933-37. In the New England, West North Central, and South Central regions the incidence is somewhat above the normal seasonal level, while the Middle Atlantic and East North Central regions report a relatively low incidence; in the South Atlantic, Mountain, and Pacific regions the incidence is about normal for this season of the year.

MORTALITY, ALL CAUSES

The average mortality rate from all causes in large cities for the 4 weeks ending March 26, based on data received from the Bureau of the Census, is 12.2 per 1,000 estimated population (annual basis). For the corresponding period in the years 1937, 1936, and 1935 the rates were 13.1, 14.2, and 12.7, respectively. The current rate is no doubt due largely to a low incidence of influenza. In 1934, a year also unusually free from influenza, the rate for this period was 12.8.

FREQUENCY OF SICKNESS AND NONINDUSTRIAL ACCIDENTS CAUSING DISABILITY LASTING 8 CALENDAR DAYS OR LONGER AMONG 60,000 WHITE MALE RAILROAD EMPLOYEES, 1930-34, INCLUSIVE¹

By WILLIAM M. GAFAFER, *Senior Statistician, United States Public Health Service*

Introduction.—The question of the frequency of occurrence of disabilities among the workers of a specific industry has been periodically raised, and an opportunity to consider the question in the instance of railroad workers presented itself when the requisite data were made available by the Occupational Morbidity and Mortality Study. The disability data of this study, representing about 60 industries, were transcribed from the medical records of the sick benefit organizations connected with the industries and, generally, cover the period 1930 to 1934, inclusive. Because of the existence, however, of certain sick benefit organization regulations, disabilities lasting less than a certain specified period of time were not recorded by the organizations. The present inquiry is based on certain selected data from six railroads. About 60,000 white male employees are represented, and during 1930-34 these averaged about 50 months of membership in their respective sick benefit organizations. Over 3 million days of disability were recorded, and these were yielded by nearly one-quarter million person-years of membership; the average daily percentage of employees disabled was 3.7.

In certain of the text tables it will be observed that the durations of disabilities, particularly the longer ones, are broadly classified. It was believed that durations in greater detail should be made generally available, and this information is presented in the appendix table.

The present report, in brief, makes inquiry into the frequency of recorded disabling sickness and disability from nonindustrial accidents lasting 8 calendar days or longer among approximately 60,000 white male railroad employees, the disabilities being specific for age group and duration, and the period of time during which the disabilities occurred extending from 1930 through 1934. It is planned to present in a later report an analysis of recorded disabling sickness among railroad workers dealing primarily with rates of disability and severity.

Inherent limitations of the data.—The sickness data, transcribed from the medical records of the sick benefit organizations, are by no means complete because of certain regulations governing the organizations. Only those disabilities were included for which sick benefits had been

¹ From the Division of Industrial Hygiene of the National Institute of Health, U. S. Public Health Service. The supporting data of this report are drawn from material collected by the Occupational Morbidity and Mortality Study of the National Health Survey. The study was made possible by a grant from the Works Progress Administration in 1935. It is planned to issue a separate report on occupational morbidity and mortality among railroad employees.

paid, and these disabilities had to be longer than the so-called *waiting period*.² Thus in four of the sick benefit organizations the length of the waiting period was 6 days, while in the other two the corresponding figure was 7 days. In this report the 7-day disabilities occurring among the employees of the railroads with organizations subscribing to a 6-day waiting period have been omitted. Furthermore, accidents of industrial origin are not included, and generally the records are not inclusive of all disabling illnesses and nonindustrial accidents of the duration specified above since most of the organizations refuse sick benefits for disability resulting from the "improper use of stimulants or narcotics," "immoral practices," venereal disease, voluntary self-injury, the violation of any civil law, and fighting. One organization debarred from membership those applicants with chronic ailments. Moreover, four of the organizations specified an age limit of 45 years for employees desiring membership, resulting probably in relatively fewer employees at the older ages in these organizations than are found among the general railroad population. Thus for all of these reasons it follows that the sickness frequencies presented in this report are probably lower than those that actually existed. Because of the importance of the organization regulations in their relation to recorded sickness, they are presented more completely and in more detail in the following section and in the table accompanying it.

*The sick benefit organizations.*³—Railroads A, B, D, and E had company-managed relief associations, railroad F had a relief association jointly managed by the company and the employees, and railroad C had group insurance.⁴ All sick benefit organizations required that the applicant for membership be an employee of the railroad company with which the particular organization was connected. Furthermore, all organizations required the passing of a physical examination by the employee desirous of becoming a member. Organizations A, B, E, and F stipulated that the applicant be less than 45 years of age, while C and D specified no age limit. Membership was voluntary in all organizations. With the exception of organization B, none barred applicants from membership because of chronic ailments. The pertinent information concerning the organizations is summarized in table 1.

Medical provisions.—Railroad A provided medical examiners, clinic treatments, and consultant and first-aid work by nurses and first-aid men. Provisions were made for the medical examination of trainmen and track workers every 2 years to age 40, and every year thereafter.

² The length of time required to elapse after onset of disability before benefit payments begin.

³ In this connection compare a report (1) based on all of the sick benefit organizations which supplied data to the Occupational Morbidity and Mortality Study.

⁴ The letters A, B, C, D, E, and F refer to the railroads, respectively, whose combined data form the material upon which this report is based. The same letters are carried by the respective sick benefit organizations of the railroads. Thus railroad A's organization is organization A.

TABLE 1.—Descriptive data concerning sick benefit organizations connected with 6 railroads

Item	Sick benefit organization A	Sick benefit organization B	Sick benefit organization C	Sick benefit organization D	Sick benefit organization E	Sick benefit organization F
Age limit of applicant. Physical examination required of applicant.	45 years. Yes.	45 years. Yes.	None. No.	None. Yes.	45 years. Yes.	45 years. Yes.
Occupations excluding from membership. Chronic ailments disbarred from membership.	None. do.	None. All.	None. do.	None. do.	None. do.	None. Do.
Length of service before eligible for membership.	do.	None.	6 months.	1 day.	do.	Do.
Retention of membership for sick benefit:						
(1) During lay-offs.	For 270 days. Membership terminates.	For 270 days. Membership terminates.	For 90 days. Membership terminates.	Prior to July 1, 1933, 60 days. After July 1, 1933, 90 days. Membership terminates.	"Remaining portion of the month's absence plus 60 days." Membership terminates.	2 years. Membership terminates.
(2) After separation.	None.	If reinstated within 9 months of discharge, member will be considered as only suspended; after 9 months, he assumes applicant's status.	Reemployment means reinstatement.	Reemployment means reinstatement.	If reinstated within 12 months, employee becomes full member without examination; otherwise he assumes applicant's status.	Upon return to duty within 24 months, employee becomes full member; otherwise he assumes applicant's status.
Provisions for reinstatement.	None.	None. 6 days.	None. 7 days.	None. 6 days, but no waiting period for nonindustrial accidents.	None. 7 days.	None. 6 days.
Initial waiting period ¹ . Waiting period ² .	None. 6 days.	None. 6 days.	None. 7 days.	None. 6 days, but no waiting period for nonindustrial accidents.	None. 7 days.	None. 6 days.
Classes of membership	5 classes depending on wages received.	5 classes depending on wages received.	1 class.	5 classes depending on wages received.	5 classes.	6 classes based on salary.

¹ The length of time required to elapse before a member becomes eligible for sick benefits after joining the sick benefit organization.² Length of time required to elapse after onset of disability before benefit payments begin.

TABLE 1.—Descriptive data concerning sick benefit organizations connected with 6 railroads—Continued

Item	Sick benefit organization A	Sick benefit organization B	Sick benefit organization C	Sick benefit organization D	Sick benefit organization E	Sick benefit organization F
Monthly dues paid by members.	\$1 to \$5, determined by membership class.	\$0.75 to \$3.75 determined by membership class.	Unknown.....	\$0.75 to \$3.75, Jan. 1, 1930 to June 30, 1934; \$0.85 to \$4.25, July 1, 1934 on.	\$0.75 to \$5.50, determined by membership class.	\$0.55 to \$4.50, determined by membership class.
Benefit period.....	52 weeks per case, half benefits continuous thereafter. 52 weeks maximum per year, half benefits continuous thereafter.	52 weeks per case, half benefits continuous thereafter. 52 weeks maximum per year, half benefits continuous thereafter.	13 weeks per case, 52 weeks maximum per year. No reduction in benefits.	104 weeks per case, 52 weeks full benefits and 52 weeks with 50 percent reduction in benefits.	For duration of illness, if member has been employed over 1 year, 52 weeks full benefits, 50 percent reduction continuous to end of illness.	For members joining prior to April 15, 1928: 52 weeks full benefits, half benefits indefinitely. For those joining after April 15, 1928: 52 weeks full benefits, and 52 weeks half benefits.
Resumption of payment of sick benefits for new cases of illness and chronic cases.	Successive periods of disability from the same cause are summed in computing the 52 weeks of full-rate benefits; if at work for 13 full weeks, the case is considered a new case, and the member is eligible for 52 full weeks again; otherwise, the member receives half benefits.	Successive periods of disability from the same cause are summed in computing the 52 weeks of full-rate benefits; if at work for 13 full weeks, the case is considered a new case, and the member is eligible for 52 full weeks again; otherwise, the member receives half benefits.	No provisions.....	All chronic diseases not specifically waived are paid for.	If a member returns to duty after receiving sick benefits for less than 12 weeks and is disabled by recurrence of the same cause within 2 weeks thereafter, or if a member returns to duty after receiving sick benefits for 12 weeks or longer, and is disabled by recurrence of the same cause within 26 weeks thereafter, the disablements, in either case, will be treated as one in computing the period for which full benefits may be paid, and if so treated the deduction of 7 days will be made only from the first disablement.	If a member has recovered from 1 disability and shall continue disabled from another which benefits are payable shall not be affected by the preceding disability. Chronic diseases when contracted in service are treated as ordinary cases. Relapse from same illness requires no waiting period.
Amount of sick benefits per week.	\$3.50 to \$17.50, depending on membership class.	\$3.50 to \$17.50, depending on membership class.	\$15.....	\$3.50 to \$17.50, depending on membership class.	\$3.50 to \$17.50, depending on membership class.	\$2.40 to \$16.80.

Are sick benefits paid for a fraction of a week?	Yes.....	Yes.....	Yes.....	Paid by day, 7-day week.	Yes.
Payment of wages during disability.	Monthly-rate employees (office and executive) are paid a fluctuating percentage of wages during which time no benefits are received from the sick benefit organization.	No wages paid during disability.	No wages paid except in exceptional cases.	In some instances wages continue for 12 days.	In some instances wages are received but no sick benefits are paid.
Notification, certification, and verification of disability.	Case must be reported immediately. Physician's certificate of illness required, and nature of illness reported by him. Company physician responsible for detecting malingering.	Proof must be submitted within 1 year. Physician's certificate of illness not required if passed by medical examiner. The latter reports nature of illness and is responsible for detecting malingering.	Proof must be submitted within 30 days. Physician's certificate of illness required and nature of illness is reported by him. No method is used to detect malingering.	Disability benefits begin with date of notification. Physician's certificate of illness required and nature of illness is reported by him. The organization physician is responsible for detecting malingering.	Case must be reported immediately. Physician's certificate of illness is required and nature of illness is reported by him. Medical examiner is responsible for detecting malingering.
Refusal of sick benefits because of.	Improper use of stimulants or narcotics, immoral practices, venereal diseases, voluntary self-injury, unlawful acts, and fighting.	Improper use of stimulants or narcotics, immoral practices, venereal diseases, voluntary self-injury, unlawful acts, and fighting.	Fighting, if aggressor--	Improper use of stimulants or narcotics, immoral practices, venereal diseases, voluntary self-injury, unlawful acts, and fighting.	Improper use of stimulants or narcotics, immoral practices, venereal diseases, voluntary self-injury, unlawful acts, and fighting.

Special examinations were made more frequently when necessary. A regular health bulletin and program were maintained. Railroad B provided free examinations to all employees when desired. The members of organization C had the nursing service of the insurance company available at the larger stations. Railroad D provided first aid and physical examinations; its organization provided "full medical benefits." Railroad E had a hospital unit for accidents and periodic examinations of train operators every 2 years. Finally, railroad F had rules requiring medical examinations every 3 years of workers under 50 years of age, and once a year of older workers.

The population exposed.—About 60,000 white male workers constitute the exposed population. The approximate percentage distribution of the exposed population by railroad is as follows: A, 42 percent; B, 10 percent; C, 15 percent; D, 17 percent; E, 10 percent; and F, 5 percent. During the 5-year period each worker was exposed on the average for approximately 50 months. The number and percent of the person-years of exposure associated with each one of 6 age groups are shown in the following table, the ages being as of July 1, 1932:

Item	Total person-years, known ages	Less than 25 years	25-34	35-44	45-54	55-64	65 and over
Number.....	245,786	6,910	49,163	77,004	71,364	37,084	4,171
Percent.....	100.0	2.81	20.00	31.37	29.03	15.09	1.70

Disabilities classified according to the relation of their onset and termination to the period under observation.—With respect to onset and termination, the disabilities suffered by the workers logically fall into 3 groups: First, those whose onset, and termination in recovery or death, occurred during the study period, 1930-34; second, those whose onset occurred during the study period but whose termination is unknown; and, third, those whose onset occurred prior to the beginning of the study period and continued into or beyond it. The disabilities constituting the first and second groups are defined as *cases*, and those entering the third group are designated *illnesses*. In the 3 groups there were, respectively, 30,612 cases, 1,882 cases, and 1,296 illnesses. Thus for the purposes of this report, *case* refers to a disability which began during the study period and lasted longer than the waiting period while a disability which began prior to the study period was not considered a case but, for purposes of differentiation, an *illness*. A *relapse* of a case or of an illness was considered a part of the case or illness which gave rise to the relapse.

Days of disability.—Days of disability include only those days of disability that occurred within the study period. Thus the days of

disability arising from an illness are represented only by the calendar days of disability included within the study period; similarly in the instance of a disability lasting beyond the study period, the days disabled are represented by the number of calendar days disabled during the study period. The days of disability from a relapse were added to the days of disability from the case or illness which gave rise to the relapse. Days of disability caused by an indisposition not lasting longer than the waiting period were disregarded. Furthermore, days of disability caused by an indisposition which terminated in death before the end of the waiting period were likewise disregarded. To remove a possible ambiguity it should be stated that the days of disability connected with a case always include the days entering a waiting period. With the foregoing explanatory remarks in mind, the present 5-year experience yielded over 3.3 million days of disabling illness of which over 1.5 million were accounted for by the 30,612 cases beginning and ending in the study period, over 1 million by the 1,882 cases beginning but not ending in the study period, and over 0.5 million by the 1,296 illnesses, that is, by disabilities beginning prior to the study period and continuing into, or beyond it.

Average daily percentage of employees disabled, and annual number of days of disability per employee.—The average daily percentage of employees disabled varied according to age group from 1.2 at ages less than 25 years to 10.7 at ages 65 years and over. At all ages the corresponding percentage was 3.7. The following table gives the percentages by age group and the data from which they were calculated. The total days of disability includes all recorded days of disability resulting from cases as well as from illnesses. It will be observed that the percentages increase with age in an orderly manner. A semi-logarithmic representation of the percentages against age group shows the increasing trend to be approximately straight, indicating that the percentages increase at an approximately uniform rate.

Age group in years	(1) Total days of disability	(2) Number of person- years of disability	(3) Number of person- years of exposure	(4) Average daily percentage of employees disabled (2) ÷ (3)	(5) Annual number of days of disability per employee (1) ÷ (3)
All ages.....	3,339,814	9,150	246,383	3.7	13.6
Less than 25.....	29,484	81	6,910	1.2	4.3
25-34.....	341,505	926	49,163	1.9	6.9
35-44.....	752,599	2,062	77,094	2.7	9.8
45-54.....	1,014,148	2,778	71,364	3.9	14.2
55-64.....	1,033,620	2,832	37,084	7.6	27.9
65 and over.....	163,222	447	4,171	10.7	39.1
Unknown.....	5,236	14	597	2.4	8.8

The table also gives the annual number of days of disability per employee. This rate increased in an orderly manner from 4.3 days

at ages less than 25 years to 39.1 days at ages 65 years and over; at all ages the rate was 13.6.

Frequency of disabling cases beginning and ending during 1930-34.—The 30,612 disabling cases that began, and ended in recovery or death, during the study period are shown distributed by age group and duration in table 2. The table also includes the calculated annual number of cases per 1,000 white males by age group and duration. The material is represented graphically in figure 1. The figure shows the behavior of the incidence of cases of different durations as age increases. It is of interest to observe that with respect to increasing age the incidence of cases lasting 8-14 days is approximately level, and that as the case-duration increases in magnitude the incidence falls lower and lower in an orderly manner. With this gradual falling of the incidence, however, there is a gradual increase in the slope of the age trend. Thus, to take the extremes, the almost level trend of the 8-14 day cases fluctuates about approximately 40 cases per 1,000 white males per year, and the trend of the 373 day and over cases rapidly rises from 0.4 of a case at less than 25 years of age to 7.2 cases at 65 years and over.

TABLE 2.—*Frequency of disabling sickness and nonindustrial accidents of specified duration among approximately 60,000¹ white male railroad employees of different age groups; cases beginning, and ending in recovery or death, during 1930 to 1934, inclusive*

Person-years of membership and duration of cases	Age in years as of July 1, 1932						
	All ages ²	Less than 25	25-34	35-44	45-54	55-64	65 and over
Person-years of membership.....	246,383	6,910	49,163	77,094	71,364	37,084	4,171
Number of cases beginning and ending during 1930 to 1934, inclusive							
Duration of cases in days:							
8 days and over.....	30,612	674	5,162	8,980	9,224	5,810	704
8-14.....	9,922	278	1,953	2,993	2,856	1,656	171
15-28.....	8,862	193	1,470	2,671	2,767	1,539	203
29-49.....	4,856	104	806	1,384	1,474	969	109
50-98.....	3,815	63	578	1,110	1,171	788	93
99-189.....	1,705	23	204	477	502	432	66
190-372.....	880	10	99	207	285	247	30
373 days and over.....	572	3	52	138	169	179	30
Annual number of cases per 1,000 white males							
Duration of cases in days:							
8 days and over.....	124.2	97.5	105.0	116.5	129.3	156.7	168.8
8-14.....	40.3	40.2	39.7	38.8	40.0	44.7	41.0
15-28.....	35.9	27.9	29.9	34.6	38.8	41.5	48.7
29-49.....	19.7	15.1	16.4	18.0	20.7	26.1	26.1
50-98.....	15.5	9.1	11.8	14.4	16.4	21.3	22.8
99-189.....	6.9	3.3	4.1	6.2	7.0	11.6	15.8
190-372.....	3.6	1.5	2.0	2.7	4.0	6.7	7.2
373 days and over.....	2.3	.4	1.1	1.8	2.4	4.8	7.2

¹ The approximate average number of months of membership per person in a sick benefit organization was 50.

² Includes some cases of persons of unknown age.

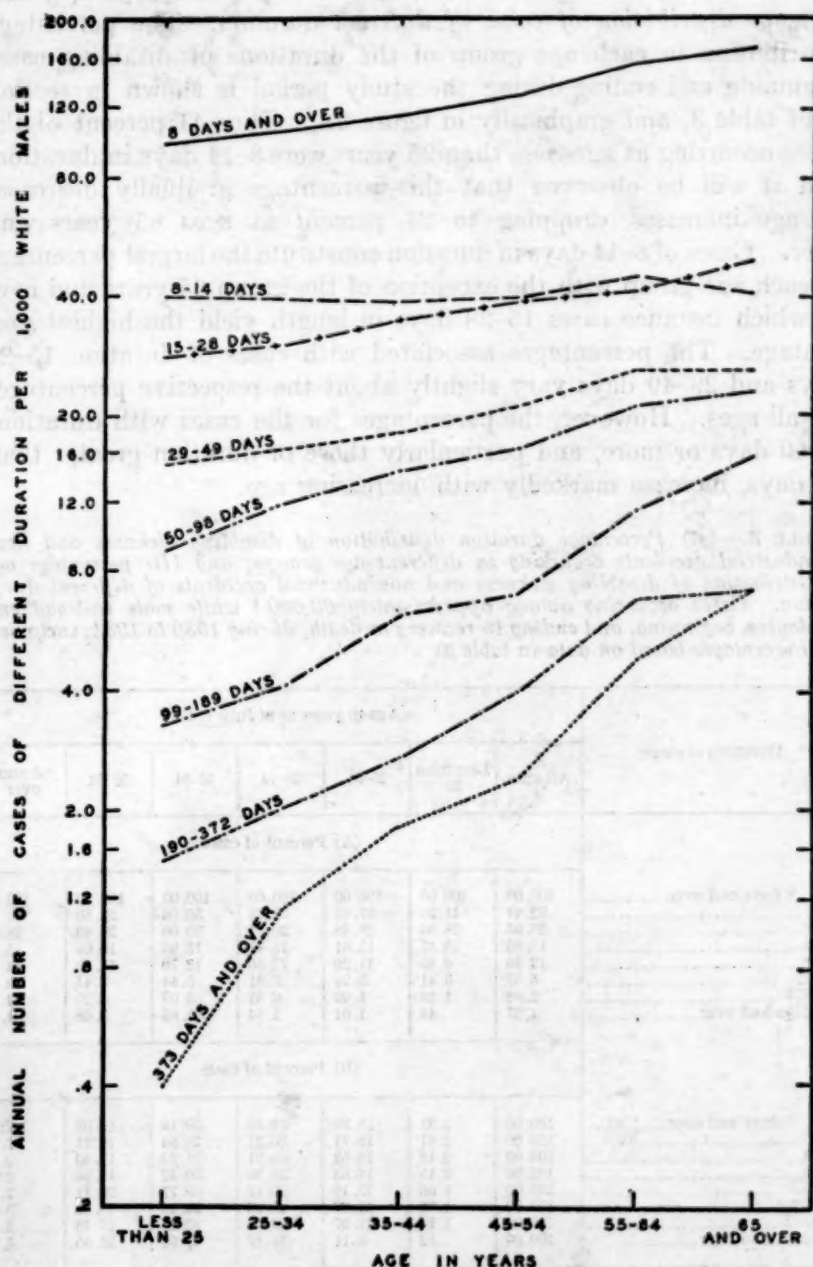


FIGURE 1.—Annual number of disabling cases of sickness and nonindustrial accidents of different duration according to age group. Disabling cases began, and ended in recovery or death, during 1930-34, inclusive, lasted 8 calendar days or longer, and occurred among approximately 60,000 white male railroad employees. (Logarithmic vertical scale.)

Disabling cases beginning and ending during 1930-1934: (A) Duration distribution of cases occurring in different age groups, and (B) age distribution of cases of different duration.—The percentage distribution in each age group of the durations of disabling cases beginning and ending during the study period is shown in section A of table 3, and graphically in figure 2A. Thus 41 percent of the cases occurring at ages less than 25 years were 8-14 days in duration and it will be observed that this percentage gradually decreases as age increases, dropping to 24 percent at ages 65 years and over. Cases of 8-14 days in duration constitute the largest percentage in each age group with the exception of the group 65 years and over in which instance cases 15-28 days in length yield the highest percentage. The percentages associated with cases of duration 15-28 days and 29-49 days vary slightly about the respective percentages for all ages. However, the percentages for the cases with durations of 50 days or more, and particularly those of duration greater than 98 days, increase markedly with increasing age.

TABLE 3.—(A) *Percentage duration distribution of disabling sickness and non-industrial accidents occurring in different age groups; and (B) percentage age distribution of disabling sickness and nonindustrial accidents of different duration. Cases occurring among approximately 60,000¹ while male railroad employees, beginning, and ending in recovery or death, during 1930 to 1934, inclusive. (Percentages based on data in table 2)*

Duration of cases	Age in years as of July 1, 1932						
	All ages	Less than 25	25-34	35-44	45-54	55-64	65 and over
(A) Percent of cases							
8 days and over.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00
8-14.....	32.41	41.25	37.83	33.33	30.96	28.50	24.29
15-28.....	28.95	28.64	28.48	29.74	30.00	26.49	28.84
29-49.....	15.86	15.43	15.61	15.41	15.98	16.68	15.48
50-98.....	12.46	9.35	11.20	12.36	12.70	13.56	13.49
99-189.....	5.57	3.41	3.95	5.31	5.44	7.44	9.38
190-372.....	2.88	1.48	1.92	2.31	3.09	4.25	4.26
373 days and over.....	1.87	.44	1.01	1.54	1.83	3.08	4.26
(B) Percent of cases							
8 days and over.....	100.00	2.21	16.89	29.39	30.19	19.02	2.30
8-14.....	100.00	2.81	19.71	30.21	28.83	16.71	1.73
15-28.....	100.00	2.18	16.62	30.21	31.29	17.40	2.30
29-49.....	100.00	2.15	16.63	28.56	30.42	19.99	2.25
50-98.....	100.00	1.66	15.19	29.17	30.77	20.71	2.50
99-189.....	100.00	1.35	11.97	27.99	29.46	25.35	3.88
190-372.....	100.00	1.14	11.27	23.58	32.46	28.13	3.42
373 days and over.....	100.00	.52	9.11	24.17	29.60	31.35	5.25

¹ See footnote 1, table 2.

Table 3 also shows, in section B, the age composition of cases of different duration; the percentages are shown graphically in figure 2B. The percentage age distribution of the exposed population giving rise

to the cases may be represented approximately by the bar representing the percentage age distribution of employees with cases 8-14 days in duration. When the percentage age distributions of the different case durations are compared with the percentage age distribution of the exposed population it will be observed that the percentages of cases in the older age groups increase with increasing duration while the percentages of cases in the younger age groups decrease with increasing duration.

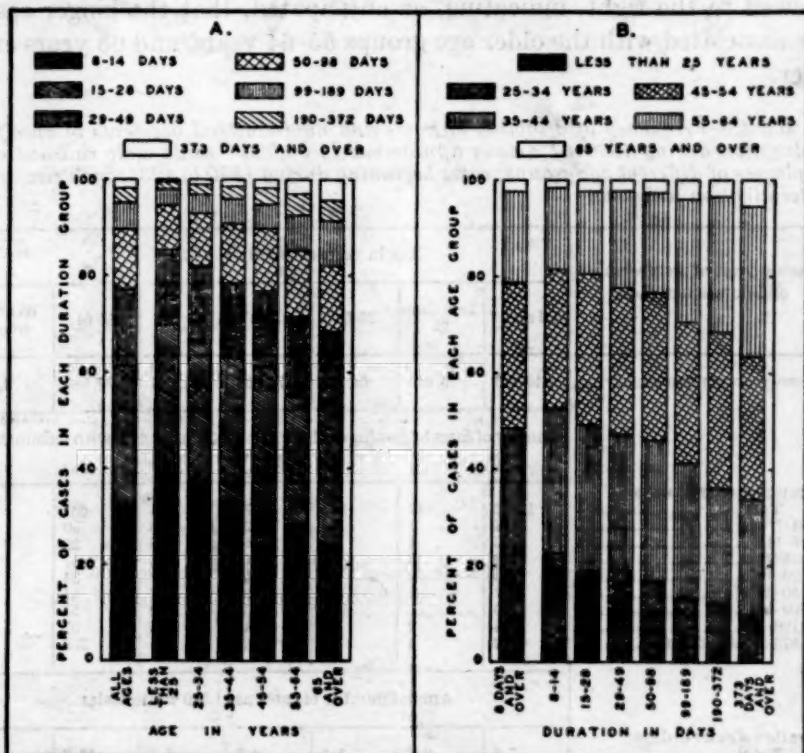


FIGURE 2.—Disabling cases began, and ended in recovery or death, during 1930-34, inclusive, lasted 8 calendar days or longer, and occurred among approximately 60,000 white male railroad employees. (A) Percentage duration distribution of disabling cases of sickness and nonindustrial accidents according to age group. (B) Percentage age distribution of disabling cases of sickness and nonindustrial accidents according to duration of case. (The bar representing the percentage age distribution of employees with disabling cases 8-14 days in duration is approximately equivalent to a bar representing the percentage age distribution of the exposed population; see text for specific percentages.)

It is of interest to examine figures 2A and 2B from another point of view, that is, instead of reading from left to right, as was done above, let the bars of the figures be read in the direction of the axis of case percentages. Such a reading of figure 2A immediately reveals that the variation of case percentages with increasing case-duration may be described by a J-shaped family of age curves while a similar reading of figure 2B shows that the variation of case percentages with increasing age may be described by an inverted U-shaped family of duration

curves. Thus, more specifically, it will be observed in figure 2A that the percentages of cases carried by each bar, each bar representing an age group, become gradually smaller as case duration increases; and in figure 2B the percentages of cases carried by each bar, each bar representing a specific case duration, begin relatively low, reach a maximum, and then decline, as age increases. The interesting fact in connection with the family of duration curves flowing from figure 2B is that the curves for the durations of 99 days and longer are skewed to the right, indicating, as anticipated, that the longer cases are associated with the older age groups 55-64 years, and 65 years and over.

TABLE 4.—*Frequency of disabling sickness and nonindustrial accidents of specified duration during 1930-34 among approximately 60,000¹ white male railroad employees of different age groups; cases beginning during 1930 to 1934, inclusive, with termination unknown*

Person-years of membership and duration of cases	Age in years as of July 1, 1932						
	All ages ²	Less than 25	25-34	35-44	45-54	55-64	65 and over
Person-years of membership.....	246,383	6,910	49,163	77,094	71,364	37,084	4,171
Number of cases beginning during 1930 to 1934, inclusive, with termination unknown							
Duration of cases in days:							
Total.....	1,882	17	153	376	491	661	151
1-7 ³	104	1	10	23	36	30	4
8-14.....	132	4	15	45	36	29	3
15-28.....	173	3	21	40	54	47	7
29-49.....	116	2	12	30	27	34	10
50-98.....	177	1	10	28	47	64	26
99-189.....	170	2	14	34	52	51	19
190-372.....	288	2	17	42	65	97	65
373 days and over.....	722	4	54	134	174	309	47
Annual number of cases per 1,000 white males							
Duration of cases in days:							
Total.....	7.6	2.5	3.1	4.9	6.9	17.8	43.4
1-7 ³.....	.4	.1	.2	.3	.5	.8	.9
8-14.....	.5	.6	.3	.6	.5	.8	.7
15-28.....	.7	.4	.4	.5	.8	1.3	1.7
29-49.....	.5	.3	.2	.4	.4	.9	2.4
50-98.....	.7	.2	.2	.4	.7	1.7	6.2
99-189.....	.7	-----	.3	.5	.7	1.4	4.6
190-372.....	1.2	.3	.4	.5	.9	2.6	15.6
373 days and over.....	2.9	.6	1.1	1.7	2.4	8.3	11.3

¹ See footnote 1, table 2.

² Includes some cases of persons of unknown age.

³ Cases which began within 7 days of the end of the period 1930 to 1934, inclusive.

Frequency of disabling cases beginning during 1930-34 but with termination unknown.—There were 1,882 disabling cases that began during the study period and whose termination is unknown. Of these cases, 722 lasted 373 days and over. The number of the cases and their annual frequency by age group and duration during the study period are shown in table 4. Of interest are the frequencies in the age groups

55-64 years, and 65 years and over, the frequency of cases of all durations being in the former age group over twice the frequency for all ages, and in the latter age group the corresponding figure is almost 6. For cases of specific duration, particularly the longer ones, of the same age groups (55-64 years, and 65 years and over) the corresponding figures are unusually high, and strikingly so in the older age group. Thus the frequency of cases lasting 190-372 days in the age group 65 years and over is 13 times the corresponding frequency for all ages.

TABLE 5.—Frequency of disabling sickness and nonindustrial accidents of specified duration among approximately 60,000¹ white male railroad employees of different age groups; cases beginning during the period 1930 to 1934, inclusive. (Tables 3 and 4 combined)

Person-years of membership and duration of cases	Age in years as of July 1, 1932						
	All ages ²	Less than 25	25-34	35-44	45-54	55-64	65 and over
Person-years of membership.....	246,383	6,910	49,163	77,094	71,364	37,084	4,171
Number of cases which began during 1930 to 1934, inclusive ³							
Duration of cases in days:							
Total.....	32,494	661	5,315	9,356	9,715	6,471	885
1-7 ⁴	104	1	10	23	36	30	4
8-14.....	10,054	262	1,968	3,038	2,892	1,085	174
15-28.....	9,035	196	1,491	2,711	2,821	1,586	210
29-49.....	4,972	106	818	1,414	1,501	1,003	119
50-98.....	3,992	64	588	1,138	1,218	852	121
99-189.....	1,875	23	218	511	554	483	85
190-372.....	1,168	12	116	249	350	344	95
373 days and over.....	1,294	7	106	272	343	488	77
Annual number of cases per 1,000 white males							
Duration of cases in days:							
Total.....	⁵ 131.9	100.0	108.1	121.4	136.1	174.5	212.2
1-7 ⁴.....	.4	.1	.2	.3	.5	.8	.9
8-14.....	40.8	40.8	40.0	39.4	40.5	45.4	41.7
15-28.....	36.7	28.4	30.3	35.2	39.5	42.8	50.4
29-49.....	20.2	15.4	16.6	18.4	21.0	27.0	28.5
50-98.....	16.2	9.3	12.0	14.8	17.1	23.0	29.0
99-189.....	7.6	3.3	4.4	6.6	7.8	13.0	20.4
190-372.....	4.7	1.7	2.4	3.2	4.9	9.3	22.8
373 days and over.....	5.3	1.0	2.2	3.5	4.8	13.2	18.5

¹ See footnote 1, table 2.

² Includes some cases of persons of unknown age.

³ Includes cases which did not end during the period 1930 to 1934, inclusive, as well as those that did end.

⁴ Cases which began within 7 days of the end of the period 1930 to 1934, inclusive.

⁵ The rates in this column (rate for duration 1-7 days excluded) when adjusted to the age distribution of gainful white male workers of the United States for 1930 read, respectively, 123.9, 40.7, 34.5, 19.0, 14.6, 6.6, 4.2, and 4.3.

Frequency of disabling cases beginning during 1930-34 regardless of termination.—To obtain the incidence of disabilities it is obviously necessary to add the number of cases that began and ended in the study period to those beginning in the period but with termination unknown. This addition has been performed, and the results are shown in table 5. As implied above the effect of the combining of the two categories of cases is largely reflected by the age groups 55-64

years, and 65 years and over. The incidence for all ages and all durations is increased from 124 to 132 cases per 1,000 males per year. It is of interest to compare the latter frequency with those for other industries. The appropriate data (2) are presented in the following tabulation:

Public Utility, Company A.....	153.2
Railroads, this report.....	131.9
Public Utility, Company B.....	110.0
Public Utility, Company C.....	105.8
Miscellaneous, Company A.....	97.6
Miscellaneous, Company B.....	84.7

The cases include those occurring among males, and only of duration of 8 days and longer. With the exception of the rate for Public Utility, Company A, all rates are based on the period 1930-34 inclusive, the exception covering the period 1933-37. The exposed populations, other than the railroad workers, include some Negroes. Because the necessary data are unavailable, the rates as given are not adjusted for possible differences in the age distributions of the populations exposed. The rate for the railroads, however, when adjusted to the age of gainful white male workers of the United States for 1930, becomes 123.9.

TABLE 6.—Frequency by duration of disabling sickness and nonindustrial accidents among approximately 60,000¹ white male railroad employees of different age groups; illnesses beginning prior to 1930 with termination during or after 1930 to 1934, inclusive

Person-years of membership, and duration of illnesses during 1930-34	Age in years as of July 1, 1932						
	All ages ²	Less than 25	25-34	35-44	45-54	55-64	65 and over
Person-years of membership.....	246,353	6,910	49,163	77,004	71,364	37,084	4,171
Number of illnesses which began prior to 1930 with termination during or after 1930 to 1934, inclusive							
Duration of illnesses in days:							
8 days and over.....	1,296	13	151	250	374	377	130
8-14.....	77	2	18	20	14	12	2
15-23.....	98	2	12	19	29	28	8
24-49.....	112	1	21	21	30	29	10
50-98.....	153	2	22	33	38	39	19
99-189.....	133	4	14	19	29	38	29
190-372.....	111	2	16	17	29	27	20
373 days and over.....	612	-----	48	112	205	204	42
Annual number of illnesses per 1,000 white males							
Duration of illnesses in days:							
8 days and over.....	5.3	1.9	3.1	3.2	5.2	10.2	31.2
8-14.....	.3	.3	.4	.4	.2	.3	.5
15-23.....	.4	.3	.2	.2	.4	.8	1.9
24-49.....	.5	.1	.4	.3	.4	.8	2.4
50-98.....	.6	.3	.5	.4	.5	1.1	4.6
99-189.....	.5	.6	.3	.2	.4	1.0	6.9
190-372.....	.5	.3	.3	.2	.4	.7	4.8
373 days and over.....	2.5	-----	1.0	1.5	2.9	5.5	10.1

¹ See footnote 1, table 2.

² Includes some cases of persons of unknown age.

Frequency of disabling illnesses during 1930-34.—As indicated previously, there were 1,296 disabilities, designated *illnesses*, which began

prior to the study period. Of these illnesses, according to the appendix table, 355 continued throughout the 5-year period, and as indicated in table 6, almost one-half lasted 373 days or over. Table 6 shows the illnesses classified according to age group by duration. It will be observed that the rate for all ages and all durations is 5.3 illnesses per 1,000. With respect to specific ages this rate is exceeded only by the corresponding rates at ages 55-64 years, and 65 years and over, being almost twice as large in the first instance and almost six times as large in the second. At ages 65 years and over there is a striking increase of the frequency with duration.

SUMMARY

This report presents the frequency of recorded disabilities of 8 calendar days or longer from sickness and nonindustrial accidents among approximately 60,000 white male railroad employees. The disabilities occurring during 1930-34, inclusive, are classified according to age group and duration. All of the supporting data were transcribed from the medical records of the sick benefit organizations connected with six railroads.

Because of certain limitations imposed by the regulations governing the sick benefit organizations it is probable that the disabling sickness frequencies as presented are lower than those that actually existed.

There were recorded 30,612 disabilities whose onset, and termination in recovery or death, occurred during 1930 to 1934, inclusive. There were 1,882 disabilities that began during the same period but whose termination was unknown. In addition, there were 1,296 disabilities whose onset occurred prior to 1930 and of which number 355 continued beyond 1934.

The annual number of disabilities beginning in the study period per 1,000 white males was found to be 132 (adjusted for age, 124). When this frequency was made specific for age group the resulting frequencies ranged from 100 at less than 25 years of age to 212 at 65 years and over.

With respect to duration, the disabilities beginning and ending in the study period showed that with increasing age the incidence of disabilities lasting 8-14 calendar days was approximately constant, and that as the duration increased in magnitude, the incidence fell lower and lower in an orderly manner. With this falling of the incidence there was a gradual increase in the slope of the age trend.

A distribution of disabilities by age group, and according to duration of greater detail than that used in the report is given in the appendix.

REFERENCES

- (1) Sayers, R. R., Kroeger, G., and Gafafer, W. M.: (1937) General aspects and functions of the sick benefit organization. Pub. Health Rep., 52: 1563-1580. (Reprint no. 1874.)
- (2) Unpublished data from the Division of Industrial Hygiene.

APPENDIX TABLE

Frequency of disabling sickness and nonindustrial accidents lasting 8 calendar days or longer by duration and age, and occurring among approximately 60,000 white male railroad employees, 1930 to 1934, inclusive*

Duration in days during 1930-34	Cases beginning, and ending in recovery or death, during 1930 to 1934, inclusive							Cases beginning during 1930 to 1934, inclusive, with termination unknown							Illnesses beginning prior to 1930 with termination during or after 1930 to 1934, inclusive						
	Age in years as of July 1, 1932							Age in years as of July 1, 1932							Age in years as of July 1, 1932						
	Total**	Less than 25	25-34	35-44	45-54	55-64	65 and over	Total**	Less than 25	25-34	35-44	45-54	55-64	65 and over	Total**	Less than 25	25-34	35-44	45-54	55-64	65 and over
Total.....	\$ 30,612	674	5,162	8,080	9,224	5,810	704	\$ 1,882	17	133	376	491	661	181	11,296	13	151	250	374	377	130
1-7***	1,402	42	249	455	406	220	21	104	1	10	23	36	30	4	11	1	6	3	2	3	
8	1,549	38	283	462	408	264	31	128	1	4	11	7	4	1	8	1	3	3	2	3	
9	1,603	45	330	480	440	275	25	172	1	3	10	2	1	1	8	1	3	2	1	1	
10	1,481	47	294	442	447	225	23	191	1	2	7	8	5	6	4	4	2	1	1	1	
11	1,256	35	270	413	365	249	20	191	1	3	5	4	6	8	2	1	1	1	1	1	
12	1,194	32	245	368	338	192	21	171	1	2	5	3	8	1	21	1	3	10	5	2	1
13	1,337	38	276	376	392	222	29	170	1	1	4	7	4	1	18	1	4	6	2	6	1
14	1,068	31	170	302	288	185	10	33	1	1	3	5	1	1	13	1	4	4	2	2	
15	1,156	20	156	303	284	147	23	15	1	1	4	6	4	1	19	1	7	2	5	2	
16	1,094	12	160	280	270	139	23	15	1	2	4	4	4	4	8	1	4	1	1	2	
17	1,179	22	153	232	217	135	7	14	1	2	1	2	6	2	5	1	4	3	5	2	
18	1,092	14	117	216	214	113	17	13	1	2	3	7	4	2	15	5	1	3	2	2	1
19	1,062	14	112	200	216	106	13	7	1	1	1	2	3	2	5	5	2	1	2	2	
20	1,180	13	180	227	235	121	16	13	1	2	3	3	4	2	6	6	2	2	1	1	
21	1,274	15	81	151	167	102	11	8	1	2	2	2	2	2	9	9	1	1	4	3	
22	1,237	9	77	143	129	78	21	11	1	1	1	1	1	1	3	3	1	1	1	1	
23	1,462	12	77	145	129	86	17	6	1	1	1	1	1	1	1	1	1	1	1	1	
24	1,440	7	73	120	147	86	17	6	1	2	3	2	3	1	1	1	1	1	1	1	
25	1,446	13	66	123	155	71	16	13	1	2	1	2	3	1	11	1	1	2	4	2	
26	1,405	5	65	105	145	71	9	8	1	1	1	2	3	1	4	1	1	1	1	1	
27	1,402	6	51	115	126	86	15	8	1	1	2	4	1	1	4	1	1	1	1	1	
28	1,402	6	51	115	126	86	15	8	1	1	2	4	1	1	4	1	1	1	1	1	
29-35	\$ 2,151	49	341	620	670	422	38	133	2	3	15	11	15	6	49	1	10	7	15	10	6
36-42	\$ 1,527	27	253	426	472	307	37	104	1	3	9	9	7	7	39	1	7	11	8	11	2
43-49	\$ 1,178	28	212	338	323	240	34	33	1	5	6	7	12	3	24	1	4	3	7	8	2
50-56	\$ 920	21	136	271	273	134	25	38	1	2	6	11	10	4	16	1	2	6	7	1	2
57-63	\$ 721	7	82	155	170	118	15	19	1	2	2	7	6	4	40	2	7	6	10	11	4
64-70	\$ 561	11	82	155	170	118	15	19	1	1	4	3	10	1	16	1	1	4	2	6	3

Frequency of disabling sickness and nonindustrial accidents lasting 8 calendar days or longer by duration and age, and occurring among approximately 60,000 while male railroad employees, 1930 to 1934, inclusive—Continued*

Duration in days during 1930-34	Cases beginning, and ending in recovery or death, during 1930 to 1934, inclusive						Cases beginning during 1930 to 1934, inclusive, with termination unknown						Illnesses beginning prior to 1930 with termination during or after 1930 to 1934, inclusive								
	Age in years as of July 1, 1932						Age in years as of July 1, 1932						Age in years as of July 1, 1932								
	Total**	Less than 25	25-34	35-44	45-54	55 and over	Total**	Less than 25	25-34	35-44	45-54	55 and over	Total**	Less than 25	25-34	35-44	45-54	55-64	65 and over		
303-420	51	1	1	17	17	13	2	30		1	3	3	15	8	13		2	3	2	5	1
421-448	69		10	11	17	18	2	33		2	9	3	13	4	9				2	4	3
449-476	52		7	11	13	19	2	24			4	1	15	4	16		3	3	5	5	2
477-504	23		2	6	4	11		14		1	2	2	7	2	11		1	2	5	3	
505-532	27		1	8	9	6	3	17			5	6	6		8						
533-560	24		2	3	3	12	1	19		2	5	6	6		7		1				
561-588	29	1	3	7	6	9	3	19		2	5	3	9		6						
589-616	17		1	4	7	5		14		2	1	4	4		3		1				
617-644	22		2	2	5	6	2	15			1	6	6	2	8			2	3		3
645-672	10			2	6	2		22		5	2	4	12	1	7		1	1	3		
673-700	17		1	5	7	4		17		2	2	2	7		5						
701-728	18			6	6	7		15		1	3	4	8		8						
729-756	12		2	4	3	1	2	24		1	2	4	14	1	7		1	3	4	2	2
757-784	10		1	3	3	4	2	16			3	3	7	3	4		1	1	2	4	3
785-812	8			6	1	4		10		1	3	1	5		5		2	3	6	1	1
813-840	7			1	6	1		12		3	1	2	6	3	2			1	1	2	1
841-868	8		2	1	2	2		8					3		5						
869-896	6				2	4		7					3	3	4		1				
897-924	12		2	3	6	3		16		1	3	3	9		1		2				
925-952	9			1	2	4		28		3	4	7	15	2	4						
953-980	4			2	2	2		24		1	1	2	11		2		1	2	3	1	1
981-1,008	7			3	2	2		21		2	7	6	9		3		1				
1,009-1,036	6			2	2	2		15				4	8		3		1	2	3	1	1
1,037-1,064	10		4	2	2	1	1	20					12		1		1	2	3	1	1
1,065-1,092	1							16					6		3						
1,093-1,120	3				1	1		9		2	3	3	3		6		1	2	3	1	1
1,121-1,148	5				2	2		11		1	1	4	3		2		1	1	1		
1,149-1,176	9			4	1	2		15					3		3						
1,177-1,204	2					1		6		1			3		2		1	1	2	3	2
1,205-1,232	1					2		15					3		3						
1,233-1,260	2		2	1	1	3	1	6					3		7		1	1	2	3	2
1,261-1,288	8		1		3	3		5					4		5						
1,289-1,316	5			3		2		12							4						

OCCURRENCE OF TULARAEMIA IN THE RABBIT TICK (*HAEMAPHYSALIS LEPORIS-PALUSTRIS*) IN ALASKA¹

By CORNELIUS B. PHILIP, *Entomologist*, and R. R. PARKER, *Director, Rocky Mountain Laboratory, United States Public Health Service*

This paper reports the recovery of *Bacterium tularense* from naturally infected rabbit ticks, *Haemaphysalis leporis-palustris*, off varying hares (snowshoe rabbits) taken in the vicinity of Fairbanks, Alaska. This is the first evidence of the occurrence of tularaemia in this territory.

The most northern point in North America from which tularaemia has been recognized previously is Athabasca, Province of Alberta, Canada. It has been reported from just below the Arctic Circle in both Europe and Asia; namely, from Hattfjelldal, Norway, and the Tobolsk district in the lower Ob River region above Obdorsk, Union of Soviet Socialist Republics.

FIELD NOTES

The senior author (C. B. P.) spent the period July 6 to 15, 1937, collecting rodents, particularly hares, in the vicinity of Fairbanks and along the Steese Highway to Circle. With the exception of one tick found on a hare at "Mile 8" on the Steese Highway, the only tick-infested animals in the area were taken on the so-called "College-loop Farm Road," some 10 to 15 miles northwest of Fairbanks, and the infected ticks came from this restricted locality.

Ticks obtained at this time and others collected subsequently in the same locality by Mr. J. W. Warwick, field assistant of the United States Bureau of the Biological Survey, were forwarded alive to the Rocky Mountain Laboratory, Hamilton, Mont., where they were tested for presence of infectious agents. *Bact. tularense* was recovered from groups of ticks representing three different collections. Two of these were obtained by one of the authors (C. B. P.) in July, the third by Mr. Warwick in August. One of the first two groups consisted of about 75 ticks of all stages, from 5 hares, and the second, of 6 adults, 48 nymphs, and 76 larvae, from one hare. The third comprised 27 nymphs, also from one hare. The last two hosts were each noted to have enlarged spleens, and one an enlarged, rather dark liver. There was no gross evidence of focal necrosis.

LABORATORY OBSERVATIONS

The above 3 groups of ticks were triturated separately in physiologic saline, and each resulting suspension was divided for injection into 2 guinea pigs, in one subcutaneously and in the other intraperitoneally.

¹ Contribution from the Division of Infectious Diseases, National Institute of Health, Rocky Mountain Laboratory, Hamilton, Mont.

All 6 animals used in these tests died or were killed when moribund. The necropsy findings were characteristic of tularaemia: the spleen was enlarged and showed focal necrosis, as did also the liver in most of the animals; one or both inguinal lymph nodes were enlarged; and, in the subcutaneously inoculated animals, there was induration or caseation at the site of infection. Each of the 3 strains thus isolated was carried through one or more transfers in guinea pigs or rabbits, all animals dying and showing typical gross lesions. The diagnosis of tularaemia was confirmed culturally by Bacteriologist Gordon E. Davis, and a culture of one of the strains was agglutinated to titer by specific rabbit antiserum.

Acknowledgments.—Mr. J. W. Warwick, Prof. Otto Geist, of the University of Alaska, and Mr. Jack White, local game warden, rendered valuable assistance in the collecting of animals.

DEATHS DURING WEEK ENDED MARCH 26, 1938

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Mar. 26, 1938	Correspond- ing week, 1937
Data from 86 large cities of the United States:		
Total deaths.....	8,927	9,302
Average for 3 prior years.....	9,416	
Total deaths, first 12 weeks of year.....	107,353	123,390
Deaths under 1 year of age.....	556	595
Average for 3 prior years.....	600	
Deaths under 1 year of age, first 12 weeks of year.....	6,506	7,583
Data from industrial insurance companies:		
Policies in force.....	69,707,502	69,556,759
Number of death claims.....	13,752	14,220
Death claims per 1,000 policies in force, annual rate.....	10.3	10.7
Death claims per 1,000 policies, first 12 weeks of year, annual rate.....	10.1	11.5

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers.

In these and the following tables a zero (0) is to be interpreted to mean that no cases or deaths occurred, while leaders (.....) indicate that cases or deaths may have occurred although none were reported.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Apr. 2, 1938, and Apr. 3, 1937

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Apr. 2 1938	Week ended Apr. 3 1937	Week ended Apr. 2 1938	Week ended Apr. 3 1937	Week ended Apr. 2 1938	Week ended Apr. 3 1937	Week ended Apr. 2 1938	Week ended Apr. 3 1937
New England States:								
Maine.....	1	0	8	1	164	15	1	0
New Hampshire.....	0	1	.....	.....	46	53	0	0
Vermont.....	0	1	.....	.....	126	2	0	0
Massachusetts.....	2	3	.....	.....	326	632	2	11
Rhode Island.....	0	1	.....	.....	2	296	1	1
Connecticut.....	6	2	6	13	32	707	3	1
Middle Atlantic States:								
New York.....	24	27	13	22	3,075	776	8	8
New Jersey.....	6	19	11	19	1,398	3,728	1	3
Pennsylvania.....	47	43	.....	.....	5,714	595	3	11
East North Central States:								
Ohio.....	33	25	.....	20	2,464	584	7	8
Indiana.....	25	10	13	312	1,189	137	1	7
Illinois.....	35	45	9	59	5,282	106	1	4
Michigan.....	13	10	.....	2	4,683	78	0	2
Wisconsin.....	4	1	30	74	3,313	19	1	0
West North Central States:								
Minnesota.....	4	8	2	1	205	47	0	1
Iowa.....	3	7	14	8	199	3	1	1
Missouri.....	16	11	62	110	699	41	2	0
North Dakota.....	0	0	5	3	87	.....	0	0
South Dakota.....	0	0	.....	.....	.....	4	0	0
Nebraska.....	0	2	.....	.....	80	9	0	2
Kansas.....	5	4	5	8	526	15	1	1
South Atlantic States:								
Delaware.....	0	9	.....	.....	15	81	0	1
Maryland.....	7	15	.....	28	50	934	2	10
District of Columbia.....	5	11	2	.....	17	69	0	2
Virginia.....	16	9	.....	.....	811	217	1	15
West Virginia.....	10	5	36	67	653	8	4	8
North Carolina.....	16	9	21	69	3,026	168	1	4
South Carolina.....	5	4	218	707	351	38	1	1
Georgia.....	7	4	.....	336	456	.....	2	2
Florida.....	31	4	4	35	801	5	1	12

See footnotes at end of table.

*Cases of certain communicable diseases reported by telegraph by State health officers
for weeks ended Apr. 2, 1938, and Apr. 3, 1937—Continued*

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Apr. 2, 1938	Week ended Apr. 3, 1937	Week ended Apr. 2, 1938	Week ended Apr. 3, 1937	Week ended Apr. 2, 1938	Week ended Apr. 3, 1937	Week ended Apr. 2, 1938	Week ended Apr. 3, 1937
East South Central States:								
Kentucky.....	13	8	30	17	502	151	9	13
Tennessee.....	6	11	49	132	415	24	2	14
Alabama.....	9	5	50	674	795	9	5	17
Mississippi.....	6	2					1	1
West South Central States:								
Arkansas.....	8	1	130	129	411	4	0	0
Louisiana.....	12	16	12	68	25	164	4	0
Oklahoma.....	7	4	95	162	111	26	1	1
Texas.....	23	42	363	1,157	141	624	3	12
Mountain States:								
Montana.....	0	1		26	22	8	1	0
Idaho.....	1	1	16		8	18	1	3
Wyoming.....	2	0	1		28	3	0	1
Colorado.....	7	5			544	4	0	0
New Mexico.....	2	4	19	3	110	129	0	3
Arizona.....	3	0	64	55	20	290	0	1
Utah.....	0	0			477	24	0	0
Pacific States:								
Washington.....	0	1	1		19	51	0	4
Oregon.....	1	1	39	36	31	9	0	0
California.....	32	22	105	417	686	136	5	3
Total.....	453	414	1,478	4,770	40,085	11,041	77	189
First 13 weeks of year.....	7,754	6,774	34,820	255,661	414,587	81,722	1,161	2,208

Division and State	Polio-myelitis		Scarlet fever		Smallpox		Typhoid and paratyphoid fever		Whoop- ing cough
	Week ended Apr. 2, 1938	Week ended Apr. 3, 1937	Week ended Apr. 2, 1938	Week ended Apr. 3, 1937	Week ended Apr. 2, 1938	Week ended Apr. 3, 1937	Week ended Apr. 2, 1938	Week ended Apr. 3, 1937	Week ended Apr. 2, 1938
New England States:									
Maine.....	0	0	13	27	0	0	0	0	32
New Hampshire.....	0	0	10	10	0	0	0	0	7
Vermont.....	1	0	19	7	0	0	0	0	17
Massachusetts.....	0	0	386	287	0	0	0	0	97
Rhode Island.....	0	0	34	55	0	0	0	0	86
Connecticut.....	0	0	143	142	0	0	1	2	49
Middle Atlantic States:									
New York.....	1	1	997	941	0	0	4	3	393
New Jersey.....	0	1	133	272	0	0	3	3	229
Pennsylvania.....	2	0	461	1,134	0	0	5	5	231
East North Central States:									
Ohio.....	1	0	293	331	15	0	2	2	142
Indiana.....	0	0	159	241	62	3	2	1	30
Illinois.....	0	2	565	861	39	67	4	0	83
Michigan.....	1	1	522	791	9	13	5	2	228
Wisconsin.....	0	0	176	304	12	2	0	1	180
West North Central States:									
Minnesota.....	0	0	147	158	23	4	3	1	29
Iowa.....	0	0	220	292	44	49	0	1	28
Missouri.....	1	0	182	275	26	62	4	0	43
North Dakota.....	1	0	31	20	5	6	0	1	35
South Dakota.....	0	0	11	76	14	2	0	0	18
Nebraska.....	0	0	37	87	0	8	0	0	12
Kansas.....	0	0	138	346	8	36	0	0	122

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Apr. 2, 1938, and Apr. 3, 1937—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid and paratyphoid fever		Whooping cough
	Week ended Apr. 2, 1938	Week ended Apr. 3, 1937	Week ended Apr. 2, 1938	Week ended Apr. 3, 1937	Week ended Apr. 2, 1938	Week ended Apr. 3, 1937	Week ended Apr. 2, 1938	Week ended Apr. 3, 1937	Week ended Apr. 2, 1938
South Atlantic States:									
Delaware.....	0	0	23	7	0	0	0	0	6
Maryland ¹	0	1	74	58	0	0	3	2	94
District of Columbia.....	0	0	18	8	0	0	0	0	14
Virginia.....	2	2	56	20	0	0	9	4	149
West Virginia.....	0	1	61	70	0	0	4	4	49
North Carolina ²	2	0	33	30	0	0	2	8	564
South Carolina.....	0	0	1	5	0	0	3	2	80
Georgia ³	0	1	13	9	0	0	1	3	35
Florida ⁴	0	2	15	8	0	0	6	1	28
East South Central States:									
Kentucky.....	0	3	96	57	9	0	7	9	74
Tennessee.....	0	1	27	27	3	0	2	2	27
Alabama ⁵	0	0	3	9	1	0	1	3	8
Mississippi ¹	9	1	7	10	2	0	4	0	-----
West South Central States:									
Arkansas.....	0	0	10	11	12	0	4	0	49
Louisiana.....	1	0	10	13	2	1	15	10	23
Oklahoma ⁶	1	0	25	22	21	1	3	2	47
Texas ⁷	0	3	118	138	29	2	18	13	414
Mountain States:									
Montana.....	0	0	16	27	7	14	1	0	22
Idaho.....	0	1	11	18	17	3	1	1	14
Wyoming.....	0	1	17	33	3	7	1	0	18
Colorado ⁸	0	0	71	41	10	16	0	1	27
New Mexico.....	0	1	14	34	0	1	0	0	31
Arizona.....	0	1	5	5	8	0	1	0	37
Utah ⁹	0	0	47	19	0	0	0	0	47
Pacific States:									
Washington.....	1	0	44	34	16	10	2	5	153
Oregon ¹	0	2	62	36	17	12	1	1	17
California.....	0	3	213	203	44	9	6	5	477
Total.....	24	29	5,767	7,609	458	328	128	98	4,545
First 13 weeks of year.....	270	277	79,381	88,382	7,164	3,982	1,566	1,406	54,013

¹ New York City only.

² Period ended earlier than Saturday.

³ Typhus fever, week ended Apr. 2, 1938, 15 cases, as follows: North Carolina, 1; Georgia, 7; Florida, 2; Alabama, 2; Texas, 3.

⁴ Figures for 1937 are exclusive of Oklahoma City and Tulsa.

⁵ Colorado tick fever for week ended Apr. 2, 1938, Colorado, 1 case.

⁶ Rocky Mountain spotted fever, week ended Apr. 2, 1938; 4 cases as follows: Utah, 1; Oregon, 3.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week.

State	Menin- gococ- cus menin- gitis	Diph- theria	Influ- enza	Mala- ria	Mea- sles	Pel- lagra	Pollo- mye- litis	Scarlet fever	Small- pox	Ty- phoid fever
February 1938										
Louisiana.....	9	42	90	16	17	14	0	48	1	66
Maryland.....	12	43	113	-----	190	1	1	279	0	5
Pennsylvania.....	22	198	-----	-----	27,752	-----	3	2,163	0	30
Puerto Rico.....	0	29	86	3,435	33	-----	0	-----	0	34
Rhode Island.....	3	2	-----	-----	12	-----	1	162	0	1
Texas.....	15	256	3,469	37	799	115	6	583	125	62
Virginia.....	17	74	2,106	4	2,028	13	0	156	4	6

Summary of monthly reports from States—Continued

February 1938

Anthrax:		Cases	German measles:		Cases	Septic sore throat:		Cases
Puerto Rico	1		Maryland	21		Louisiana	16	
Texas	1		Pennsylvania	234		Rhode Island	10	
Chickenpox:			Rhode Island	2		Virginia	36	
Louisiana	77		Hookworm disease:			Tetanus:		
Maryland	761		Louisiana	12		Louisiana	3	
Pennsylvania	5,360		Impetigo contagiosa:			Maryland	1	
Puerto Rico	36		Maryland	13		Puerto Rico	10	
Rhode Island	137		Jaundice:			Tetanus, infantile:		
Texas	1,271		Maryland	14		Puerto Rico	1	
Virginia	400		Leprosy:			Trachoma:		
Conjunctivitis:			Louisiana	1		Louisiana	3	
Rhode Island	1		Mumps:			Trichinosis:		
Dengue:			Louisiana	16		Maryland	1	
Texas	34		Maryland	128		Tularaemia:		
Diarrhea:			Pennsylvania	4,623		Louisiana	2	
Maryland	5		Rhode Island	13		Pennsylvania	1	
Dysentery:			Texas	292		Texas	6	
Louisiana (amoebic)	1		Virginia	347		Virginia	1	
Maryland (bacillary)	1		Ophthalmia neonatorum:			Typhus fever:		
Pennsylvania (amoebic)	1		Louisiana	1		Louisiana	1	
Puerto Rico	17		Maryland	1		Texas	22	
Texas (amoebic)	3		Rhode Island	1		Undulant fever:		
Texas (bacillary)	36		Virginia	1		Louisiana	4	
Virginia (diarrhea included)	23		Paratyphoid fever:			Maryland	5	
Encephalitis, epidemic or			Louisiana	3		Pennsylvania	6	
lethargic:			Texas	6		Rhode Island	1	
Louisiana	1		Puerperal septicaemia:			Virginia	1	
Maryland	1		Puerto Rico	1		Vincent's infection:		
Pennsylvania	2		Rabies in animals:			Maryland	11	
Rhode Island	1		Louisiana	19		Whooping cough:		
Texas	4		Maryland	4		Louisiana	52	
Virginia	1		Rabies in man:			Maryland	259	
Filariasis:			Louisiana	2		Pennsylvania	1,288	
Puerto Rico	1		Scabies:			Puerto Rico	104	
			Maryland	2		Rhode Island	175	
						Texas	921	
						Virginia	362	

WEEKLY REPORTS FROM CITIES

City reports for week ended Mar. 26, 1938

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table.

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
Data for 90 cities: 5-year average.....	192	461	110	7,007	913	2,663	27	408	22	1,404	-----
Current week ¹	131	159	47	10,360	709	2,045	49	363	34	1,206	-----
Maine:											
Portland.....	0	-----	0	13	2	3	0	0	0	29	21
New Hampshire:											
Concord.....	0	-----	0	0	0	0	0	0	0	0	7
Manchester.....	0	-----	0	1	1	7	0	1	0	0	7
Nashua.....	0	-----	0	0	0	1	0	0	0	0	9
Vermont:											
Barre.....	0	-----	0	0	0	0	0	0	0	0	1
Burlington.....	1	-----	0	11	0	2	0	0	0	5	10
Rutland.....	0	-----	0	0	0	0	0	0	0	0	3
Massachusetts:											
Boston.....	0	-----	1	220	32	126	0	6	3	22	232
Fall River.....	0	-----	0	1	2	1	0	1	0	5	30
Springfield.....	0	-----	0	22	6	3	0	0	0	24	29
Worcester.....	0	-----	0	3	9	31	0	2	0	0	52
Rhode Island:											
Pawtucket.....	0	-----	0	0	0	4	0	0	0	0	28
Providence.....	0	-----	0	1	6	18	0	2	1	13	59
Connecticut:											
Bridgeport.....	0	-----	0	0	6	20	0	2	0	2	43
Hartford.....	0	1	0	3	6	29	0	1	0	2	44
New Haven.....	0	-----	0	6	3	4	0	2	0	10	37
New York:											
Buffalo.....	0	-----	0	7	20	63	0	8	0	5	164
New York.....	25	12	4	1,584	146	496	0	80	7	239	1,712
Rochester.....	0	1	0	7	1	22	0	2	0	8	66
Syracuse.....	1	-----	0	37	4	3	0	1	0	13	57
New Jersey:											
Camden.....	1	2	2	28	3	10	0	0	0	4	27
Newark.....	0	2	1	39	12	25	0	3	0	42	107
Trenton.....	0	-----	0	1	4	3	0	0	1	2	30
Pennsylvania:											
Philadelphia.....	9	4	3	796	32	157	0	16	1	37	507
Pittsburgh.....	4	2	4	276	21	42	0	10	0	17	157
Reading.....	0	-----	1	13	1	1	0	0	0	3	19
Scranton.....	0	-----	-----	65	-----	2	0	-----	0	9	-----
Ohio:											
Cincinnati.....	4	-----	2	4	8	8	0	9	0	4	158
Cleveland.....	0	15	2	343	18	69	0	11	0	38	190
Columbus.....	2	1	1	265	6	6	18	3	0	1	84
Toledo.....	2	1	0	125	5	10	0	3	0	19	83
Indiana:											
Anderson.....	0	-----	0	82	0	2	3	0	0	2	12
Fort Wayne.....	0	-----	0	136	4	8	0	0	0	1	30
Indianapolis.....	11	-----	2	248	9	17	1	2	0	9	89
Muncie.....	0	-----	0	0	0	0	0	0	0	0	9
South Bend.....	0	-----	0	48	2	1	5	0	0	0	14
Terre Haute.....	2	-----	-----	25	-----	1	0	-----	0	0	-----
Illinois:											
Alton.....	0	-----	0	0	0	4	0	0	0	0	4
Chicago.....	13	-----	1	3,103	48	253	2	40	2	38	700
Elgin.....	2	-----	0	3	4	4	0	0	0	5	15
Moline.....	0	-----	0	41	1	5	0	0	0	1	6
Springfield.....	0	-----	0	267	2	4	0	0	0	4	24
Michigan:											
Detroit.....	4	-----	1	3,027	17	132	0	11	0	93	239
Flint.....	0	-----	0	45	1	45	0	0	0	34	32
Grand Rapids.....	0	-----	0	127	4	19	0	0	0	2	35
Wisconsin:											
Kenosha.....	0	-----	0	24	0	5	0	0	0	1	8
Milwaukee.....	2	2	2	3,053	3	19	0	3	1	39	138
Racine.....	0	-----	0	150	0	10	0	0	0	17	12
Superior.....	0	-----	0	9	1	6	1	0	0	2	9

¹ Figures for Wheeling (cases) estimated; report not received.

City reports for week ended Mar. 26, 1938—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Minnesota:											
Duluth.....	0		0	0	1	2	0	0	0	17	29
Minneapolis.....	0		1	68	11	25	2	0	0	3	113
St. Paul.....	0		0	9	7	7	3	4	0	2	60
Iowa:											
Cedar Rapids.....	0			3		6	0		0	3	
Davenport.....	1			0		3	0		0	0	
Des Moines.....	0		0	4	0	32	0	0	0	0	36
Sioux City.....	0			0		8	0		0	0	
Waterloo.....	2			119		5	0		0	0	
Missouri:											
Kansas City.....	1		0	175	15	7	0	2	0	1	91
St. Joseph.....	0		0	97	1	2	0	0	0	0	26
St. Louis.....	7		1	10	15	88	1	3	2	3	208
North Dakota:											
Fargo.....	0		0	0	0	2	0	0	0	1	3
Grand Forks.....	0			5		0	0		0	0	
South Dakota:											
Aberdeen.....	0			1		0	0		0	6	
Nebraska:											
Lincoln.....	1			3		7	0		0	0	
Omaha.....	0		0	19	14	1	0	5	0	1	61
Kansas:											
Lawrence.....	0		1	0	1	0	0	0	0	2	4
Topeka.....	0		0	88	2	2	0	0	0	32	13
Wichita.....	0		0	9	5	4	0	1	0	7	33
Delaware:											
Wilmington.....	0		0	18	6	3	0	0	0	4	42
Maryland:											
Baltimore.....	2	7	0	12	27	43	0	15	0	37	234
Cumberland.....	0		0	7	1	0	0	0	0	0	8
Frederick.....	0		0	5	0	0	0	0	0	0	1
Dist. of Col.:											
Washington.....	6	1	0	18	12	28	0	9	0	6	177
Virginia:											
Lynchburg.....	0		0	0	3	0	0	1	0	1	17
Norfolk.....	0		0	133	3	13	0	1	0	9	24
Richmond.....	0		0	61	4	4	0	4	0	2	58
Roanoke.....	0		0	0	1	1	0	0	0	7	18
West Virginia:											
Charleston.....	0	1	0	18	1	1	0	0	0	0	12
Huntington.....	0			5		1	0		0	0	
Wheeling.....			0		2			1			22
North Carolina:											
Gastonia.....	0			23		0	0		0	14	
Raleigh.....	0		0	71	2	0	0	0	0	30	14
Wilmington.....	0		0	248	2	0	0	0	0	17	7
Winston-Salem.....	0		0	3	2	0	0	2	1	46	17
South Carolina:											
Charleston.....	0	38	0	29	3	2	0	1	0	2	20
Florence.....	0		0	9	1	0	0	0	0	0	15
Greenville.....	0		0	1	4	0	0	0	0	10	21
Georgia:											
Atlanta.....	2	12	1	72	11	4	2	5	0	9	91
Brunswick.....	1		0	6	0	0	0	0	0	0	4
Savannah.....	0	6	0	75	2	0	0	2	0	2	39
Florida:											
Miami.....	0		0	78	3	2	0	1	0	0	31
Tampa.....	4	1	1	6	0	0	0	1	0	0	26
Kentucky:											
Ashland.....	0			1		0	0		0	8	
Covington.....	0		0	1	1	0	0	0	0	0	13
Lexington.....	0		0	0	1	1	0	0	0	2	19
Louisville.....	9	2	1	265	5	39	0	2	0	14	83
Tennessee:											
Knoxville.....	0	1	0	55	2	1	0	2	0	8	30
Memphis.....	2		1	37	11	3	0	8	0	3	81
Nashville.....	0		1	145	6	5	0	2	0	13	47
Alabama:											
Birmingham.....	1	11	2	193	8	4	0	5	2	0	74
Mobile.....	0	2	3	81	2	1	0	0	0	0	27
Montgomery.....	0			80		0	0		0	1	
Arkansas:											
Fort Smith.....	0			5		1	0		0	0	
Little Rock.....	0		0	66	3	0	0	2	0	2	6

City reports for week ended Mar. 26, 1938—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Louisiana:											
Lake Charles.....	0		0	0	0	0	0	0	1	2	8
New Orleans.....	4	15	0	1	10	6	0	15	9	22	154
Shreveport.....	0		0	6	5	4	0	2	1	0	36
Oklahoma:											
Muskogee.....	0			0		0	0		0	2	
Oklahoma City.....	0		0	0	5	5	0	1	0	0	33
Tulsa.....	0			28		3	4		0	8	
Texas:											
Dallas.....	2	1	1	6	6	17	0	3	0	2	60
Fort Worth.....	1		0	0	8	6	2	1	0	12	50
Galveston.....	0		0	0	1	0	0	1	0	0	16
Houston.....	1	1	1	0	11	1	0	8	1	0	83
San Antonio.....	0		2	0	5	0	0	3	0	0	66
Montana:											
Billings.....	0		0	0	0	2	0	0	0	0	6
Great Falls.....	0		0	0	0	0	2	0	0	5	6
Helena.....	0		0	0	0	0	0	0	0	2	1
Missoula.....	0	1	1	0	2	0	0	0	0	0	8
Idaho:											
Boise.....	0		0	0	3	2	4	0	0	0	12
Colorado:											
Colorado Springs.....	0		0	0	2	4	0	1	0	0	14
Denver.....	2		0	397	9	18	0	4	0	1	86
Pueblo.....	0		1	1	3	2	0	1	0	10	16
Utah:											
Salt Lake City.....	2		0	173	4	11	0	1	1	4	28
Washington:											
Seattle.....	0		0	1	6	4	0	5	0	47	100
Spokane.....	0	1	1	1	0	3	1	2	0	13	31
Tacoma.....	0		0	0	1	13	0	1	0	6	39
Oregon:											
Portland.....	1	2	0	10	11	9	8	1	0	2	92
Salem.....	0	2		1		0	0		0	0	
California:											
Los Angeles.....	15	16	1	29	19	46	9	15	1	20	328
Sacramento.....	0	1	1	8	1	1	0	3	0	53	31
San Francisco.....	1	2	0	0	4	12	0	11	0	62	157

State and city	Meningococcus meningitis		Polio-myelitis cases	State and city	Meningococcus meningitis		Polio-myelitis cases
	Cases	Deaths			Cases	Deaths	
Massachusetts:				Missouri:			
Boston.....	4	0	0	Kansas City.....	1	0	0
Rhode Island:				Nebraska:			
Providence.....	1	0	0	Omaha.....	1	0	0
New York:				Maryland:			
Buffalo.....	3	0	0	Baltimore.....	1	1	0
New York.....	3	3	1	District of Columbia:			
Rochester.....	0	0	1	Washington.....	1	0	0
Syracuse.....	1	0	0	North Carolina:			
Pennsylvania:				Raleigh.....	0	1	0
Philadelphia.....	0	1	0	Florida:			
Pittsburgh.....	1	1	0	Miami.....	1	1	0
Ohio:				Kentucky:			
Cincinnati.....	2	0	0	Louisville.....	1	0	0
Columbus.....	1	1	1	Alabama:			
Indiana:				Birmingham.....	2	0	0
Anderson.....	1	0	0	Arkansas:			
Illinois:				Little Rock.....	0	1	0
Chicago.....	1	0	0	Louisiana:			
Michigan:				New Orleans.....	1	0	0
Detroit.....	0	0	1	Shreveport.....	0	1	0
Minnesota:				Texas:			
Minneapolis.....	0	0	1	Dallas.....	1	1	0

Encephalitis, epidemic or lethargic.—Cases: New York, 1; Newark, 1; St. Louis, 1; New Orleans, 1; San Francisco, 2; Washington, D. C., 1.

Pellagra.—Cases: Atlanta, 2; Memphis, 1; Birmingham, 3; Dallas, 1; Los Angeles, 3.

Typhus fever.—Cases: Savannah, 1.

FOREIGN AND INSULAR

FINLAND

Communicable diseases—February 1938.—During the month of February 1938, cases of certain communicable diseases were reported in Finland as follows:

Disease	Cases	Disease	Cases
Diphtheria.....	250	Scarlet fever.....	758
Influenza.....	3,541	Typhoid fever.....	11
Paratyphoid fever.....	22	Undulant fever.....	2
Poliomyelitis.....	3		

IRISH FREE STATE

Vital statistics—Fourth quarter ended December 31, 1937.—The following vital statistics for the Irish Free State for the quarter ended December 31, 1937, are taken from the Quarterly Return of Marriages, Births, and Deaths, issued by the Registrar General, and are provisional:

	Num- ber	Rate per 1,000 popula- tion		Num- ber	Rate per 1,000 popula- tion
Marriages.....	3,620	4.9	Deaths from—Continued.		
Births.....	12,868	17.5	Influenza.....	126	0.17
Total deaths.....	9,920	13.5	Measles.....	20	
Deaths under 1 year of age.....	889	1.60	Puerperal sepsis.....	8	1.62
Deaths from:			Scarlet fever.....	27	
Cancer.....	910	1.24	Tuberculosis (all forms).....	733	1.00
Diarrhea and enteritis (un- der 2 years).....	143		Typhoid fever.....	21	
Diphtheria.....	79		Whooping cough.....	35	

¹ Per 1,000 births.

(583)

Vital statistics—Year 1937.—The following vital statistics for the Irish Free State for the year 1937 are taken from the Quarterly Return of Marriages, Births, and Deaths, issued by the Registrar General, and are provisional:

	Num- ber	Rate per 1,000 popula- tion		Num- ber	Rate per 1,000 popula- tion
Marriages.....	14,896	5.1	Deaths from—Continued.		
Births.....	56,564	19.2	Influenza.....	2,698	0.92
Total deaths.....	45,115	15.3	Measles.....	120	
Deaths under 1 year of age.....	4,057	1.72	Puerperal sepsis.....	44	1.78
Deaths from:			Scarlet fever.....	127	
Cancer.....	3,558	1.21	Tuberculosis (all forms).....	3,583	1.22
Diarrhea and enteritis (under 2 years).....	601		Typhoid fever.....	65	
Diphtheria.....	289		Typhus fever.....	4	
			Whooping cough.....	276	

¹ Per 1,000 births.

ITALY

Communicable diseases—4 weeks ended January 30, 1938.—During the 4 weeks ended January 30, 1938, cases of certain notifiable diseases were reported in Italy as follows:

Disease	Jan. 3-9	Jan. 10-16	Jan. 17-23	Jan. 24-30
Anthrax.....	14	19	15	11
Cerebrospinal meningitis.....	17	26	19	35
Chickenpox.....	278	315	368	373
Diphtheria.....	604	618	630	665
Dysentery.....	16	25	30	31
Hookworm disease.....	3	9	4	8
Lethargic encephalitis.....	1	3	6	1
Measles.....	1,572	1,730	1,731	2,320
Mumps.....	100	216	257	203
Paratyphoid fever.....	40	60	47	38
Pellagra.....	4	4	1	3
Poliomyelitis.....	13	17	17	11
Puerperal fever.....	48	55	59	47
Scarlet fever.....	189	219	294	248
Typhoid fever.....	292	325	340	285
Undulant fever.....	36	45	60	86
Whooping cough.....	215	281	376	401

SWEDEN

Notifiable diseases—February 1938.—During the month of February 1938, cases of certain notifiable diseases were reported in Sweden as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis.....	5	Poliomyelitis.....	¹ 51
Diphtheria.....	3	Scarlet fever.....	1,704
Dysentery.....	23	Syphilis.....	22
Epidemic encephalitis.....	1	Typhoid fever.....	4
Gonorrhea.....	886	Undulant fever.....	19
Paratyphoid fever.....	9	Well's disease.....	2

¹ Includes 6 cases nonparalytic at time of notification.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for March 25, 1938, pages 470-483. A similar cumulative table will appear in future issues of the PUBLIC HEALTH REPORTS for the last Friday of each month.

Cholera

Indochina (French).—During the week ended March 26, 1938, cholera was reported in French Indochina as follows: Annam Province, 6 cases; Tonkin Province, 17 cases; Hanoi, 7 cases.

Plague

Niger Territory (French)—North Tanout.—During the period March 10-20, 1938, 26 cases of plague with 16 deaths were reported in North Tanout, French Niger Territory.

Union of South Africa—Cape Province—Port Elizabeth.—During the week ended April 2, 1938, three deaths from plague were reported in Port Elizabeth, Cape Province, Union of South Africa.

Yellow Fever

Brazil.—Deaths from yellow fever have been reported in Brazil as follows: Minas Geraes State—Alvinopolis, February 20-25, 3; Barbacena, March 6, 1 (first appearance); Entre Rios, February 17-25, 4; Guiricema, March 2, 1 (first appearance); Gymirim, March 5, 1; Juiz de Fora, March 3-8, 3; Lagoa Dourada, February 27, 1 (first appearance); Machado, February 14, 1; Monlevade, March 4, 1 (first appearance); Rezende Costa, March 1, 1; Rio Preto, March 1-3, 2; Rio de Janeiro State—Duas Barras, March 10, 1 (first appearance); Teresopolis, March 8, 1 (first appearance).